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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,179	10/30/2001	Brian Pond	05236-1025	7667

7590 03/31/2004

Parkhurst & Wandel LLP
1421 Prince Street
Suite 210
Alexandria, VA 22314-2805

EXAMINER	
PASSANITI, SEBASTIANO	
ART UNIT	**PAPER NUMBER**
3711	12

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/016,179	Applicant(s) POND ET AL.	
	Examiner Sebastiano Passaniti	Art Unit 3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 October 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is responsive to communication received 12/17/2003 – Request for Extension of Time and Election.

In view of applicant's arguments received 12/17/2003, the requirement for election has been withdrawn. Applicant is reminded that if a requirement to restrict becomes proper at a later stage in prosecution, restriction may again be required. See MPEP §811.03.

Claims 1-39 remain pending.

Following is an action on the MERITS:

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the wood-type club heads and iron-type club heads described in claims 16, 32 and 39 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claims 27-30 and 33 are objected to because of the following informalities: In each of these claims, it is unclear which "insert" is being referenced. In other words, is the applicant referring to the "face-insert" or the "rear-insert", each of which is recited in independent claim 21. Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, 10, 16, 21, 23, 27, 30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Sun. As to claim 1, note toe (14), heel (15) and central portion (11) serving as the claimed insert located within a cavity between the heel and toe portions. As to claim 5, the insert naturally must increase the natural frequency of the head, since Sun indicates that the central section may be fabricated from aluminum or a non-metallic material, e.g., a pre-injected plastic alloy, as required and described by the applicant in his specification. As to claim 10, here again it is noted that Sun extruded aluminum as the material of choice for the insert (col. 2, line 20). As to claim 16, Sun shows a putter-style club head. As to claim 21, Sun again shows a toe, a heel and a centrally located cavity sized to accommodate a rear insert. Sun further includes

a face insert (22). As to claims 23 and 24, Figure 3 in Sun clearly shows that the face-insert (22) comprises at least 50% of the surface area of the front face and more particularly between about 45% and 75% of the surface area of the strike face. As to claim 27, here again, Sun is deemed to naturally provide an increase in the natural frequency of the head. As to claim 30, shaft (24) is shown as clearly being located within the insert (11). As to claim 32, the Sun device depicts a putter-style club head.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun. Though the specific claimed material for the face-insert is not detailed by Sun, it is noted that Sun generally advices the skilled artisan to choose an aluminum or pre-injected plastic (non-metallic) alloy for the central portion as well as a light weight material such as a light weight polymer or rubber composite for the face-insert (22). In this manner, the central portion of the head is made as light as possible, so that a majority of the club head weight may be concentrated at the heel and toe ends. As such, the skilled artisan would have found it obvious to modify the device in Sun to take advantage of any one of a plethora of available light weight non-metallic materials for the face-insert in order to maintain the weight requirements of the head. Moreover, the selection of a material to take advantage of its natural properties, in this case, the selection of a light weight material, would have been obvious to the skilled artisan based upon the Patent law established by **In re Hopkins** 145 USPQ 140.

Claims 1, 6, 10, 13, 16, 21, 23, 24, 28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Rudell. As to claim 1, note toe portion (21) along with heel portion (19). Central portion (23) extends between the toe and the heel and

forms a rearward cavity that contains "insert" (17). As to claim 6, the insert (17) is coupled to the back face of the head, with the back face located opposite to a front ace (33). As to claim 10, the head may be made entirely of aluminum (col. 5, lines 48-51). Thus, the insert, as defined above, is formed of aluminum. As to claim 13, note col. 8, lines 25-33, wherein Rudell indicates that a hosel and shaft arrangement my be employed instead of simply a shaft connection. In this manner, the hosel would indeed be positioned in the insert. As to claim 16, Rudell shows a putter-style club head. As to claim 21, here again, note that Rudell includes a heel, toe and central portion, with the central portion including a cavity rearward of the front face and containing a rear-insert. The front face surface (33) includes a "face-insert" in the form of a wood surface portion (32). As the wood surface portion (32) may be secured via a tongue-and-groove connection, the wood surface portion (32) may clearly be interpreted as a "face-insert". As to claims 23 and 24, reference is made to Figure 4, wherein Rudell clearly shows that the face-insert (32) comprises at least 50% of the surface area of the front face and more particularly between about 45% and 75% of the surface area of the strike face. As to claim 28, the insert (17) is coupled to the back face, rearward of the striking surface. As to claim 30, the shaft (13) is positioned within the insert (17).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rudell in view of McGeeney. Although Rudell does not explicitly detail a powder metallurgy process, it is noted that Rudell states that the club head (and thus the "insert") may be made from any one of a number of materials, including both metallic and non-metallic materials. See col. 5, lines 48-64 in Rudell. As such, the skilled artisan would have

found it obvious to select a suitable material and associated manufacturing process based upon the availability of materials known in the art and any cost considerations. Note that the teaching reference to McGeeney obviates the use of a powder metallurgy process in the golf club head art, as McGeeney makes use of this process to fabricate at least a portion of the head (col. 5, lines 26-46).

Claims 1, 5, 6, 16, 17, 20, 21, 23, 24, 27, 28, 32 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Ebbing. As to claim 1, note toe (24), heel (25) and center section defining central cavity (42), sized to receive an insert (44). As to claim 5, the insert (44) naturally increases the natural frequency of the head. As to claim 6, the insert is coupled to the back face, as shown in Figure 3. As to claim 16, Ebbing shows a putter-style club head. As to claim 17, a rubber cushioning material may be wrapped about the insert (44) to prevent rattling thereof (col. 5, lines 20-26). As to claim 20, the rubber cushioning material, i.e., the dampener, will clearly alter the sound of the head when a golf ball is struck. As to claim 21, note that Ebbing includes all of the recited features including a face-insert (20). As to claims 23 and 24, Figures 1, 2 and 3 in Ebbing clearly show that the face-insert (20) comprises at least 50% of the surface area of the front face and more particularly between about 45% and 75% of the surface area of the strike face. As to claim 27, here again the insert (44) naturally increases the natural frequency of the head, as broadly as claimed. As to claim 28, the insert (44) is coupled to the back face (see Figure 3). As to claim 32, the Ebbing device shows a putter-style club head. As to claim 33, a dampener material in the form of a rubber cushioning may couple the insert to the cavity.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebbing. While Ebbing simply mentions rubber as a material for the dampener that surrounds the insert (as defined above), the skilled artisan would have found it obvious to select an appropriate material for the dampener based upon the availability of materials in the art and the specific weight considerations of the head. Moreover, to have selected a suitable material based upon its natural properties would have boon obvious to the club maker, as evidenced by the Patent law established by **In re Hopkins** 145 USPQ 140.

Claims 2, 3 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun in view of Reiss. Note that while Sun does not detail specific weight percentages for the toe and heel, the intent of Sun is to maximize the weight at the outer extreme ends of the head in order to enhance the moment of inertia and thereby help to reduce club head twisting during off-center shots (col. 1, lines 51-60). Reiss shows it to be old in the art to heavily weight the ends of a putter head, with the weight of the heel and toe making up between about 60% and 90% of the weight of the head (col. 1, lines 51-67). Reiss likewise desires to enhance the moment of inertia by concentrating the weight of the head at the extreme toe and heel ends, thereby enlarging the "sweet spot". In view of the patent to Reiss, it would have been obvious to modify the Sun device to include at least 80% and further at least 90% of the club head weight at the toe and heel ends, the motivation being to increase the size of the sweet spot and increase the club head's resistance to rotation during off-center shots.

Claims 14, 15 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudell in view of Buettner. Although Rudell does not expressly state that a vapor deposition is employed on at least a portion of the head, Rudell does imply that any one of a number of finishing processes may be used for the head depending upon the material selection thereof. See col. 7, lines 3-14 in Rudell, wherein it is stated that a highly polished appearance for the head is desirable and that an anodized aluminum or other material provided with a suitable surface treatment is preferred . The use of a vapor deposition process using, for example, titanium material as the coating, on a golf club head to impart a tough, hard, low friction and lustrous outward look is obviated by the patent to Buettner (see col. 3, lines 40-52). Thus, the skilled artisan would have been motivated to modify the club head in Rudell using a vapor deposition process to coat the head with an appropriate material for the reasons advanced in Buettner.

Claims 1, 7, 11 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Podgor. As to claim 1, note that the Podgor device includes the typical heel and toe ends along with a central section connecting the heel and the toe. The central section further includes a cavity within which insert or disk (10) is fitted. As to claim 7, the insert in this case is clearly located adjacent the floor of the cavity in the central portion, as shown in Figure 1. As to claim 11, the disk (10) is transparent (col. 3, lines 23-25). As to claim 29, note alignment mark (17) visible through the transparent element (10).

Claims 1, 8, 9, 10 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Whitlam. As to claim 1, note heel (48) and toe (50) and center section (46) forming a cavity within which insert (54) is fitted. For details of the insert, note col.

3, lines 16-25. Specific to claims 8 and 9, note that Whitlam states that the insert may weigh between about 2 and 150 grams.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebbing in view of Raines. Ebbing shows every feature claimed with the exception of the specific claimed wall thickness. Raines shows it to be old in the art to provide a wall thickness of about 1/8 inch thick for a putter that is fabricated from aluminum (col. 1, lines 28-31 and col. 2, lines 15-25). Clearly, the thickness of the wall would have depended upon the material selected for the head and the manufacturing limitations associated therewith. The skilled artisan, in view of the patent to Raines, would have found it obvious to modify the Ebbing device by constructing the walls of the cavity with a thickness between 0.020 and 0.20 inch in order to maintain the integrity of the hollow shell and conforming to the weight requirements of the head. Note that the cavity in the primary Ebbing device includes a back wall, floor, two sides and a roof (Figures 2 and 3).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun in view of Fisher. To have modified the device in the cited art reference to Sun by replacing the face-insert (22) with another face-insert having the claimed Bayshore rebound in order to alter the ball-striking characteristics of the head would have been obvious in view of the patent to Fisher, which shows it to be old in the art of putter heads to include a face portion with a specific ball-impacting rebound factor that may be varied to accommodate the hardness level of the face with which a golfer is most comfortable. See col. 2, lines 24-37along with col. 8, lines 26-40 in Fisher.

Claims 34, 35 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podgor in view of Reiss. Podgor shows every feature claimed with the exception of indicating that a majority of eh mass of the head, i.e., 80% is located proximate the heel and toe. Reiss shows it to be old in the art to heavily weight the ends of a putter head, with the weight of the heel and toe making up between about 60% and 90% of the weight of the head (col. 1, lines 51-67). Reiss likewise desires to enhance the moment of inertia by concentrating the weight of the head at the extreme toe and heel ends, thereby enlarging the "sweet spot". In view of the patent to Reiss, it would have been obvious to modify the Podgor device to include at least 80% of the club head weight at the toe and heel ends, the motivation being to increase the size of the sweet spot and increase the club head's resistance to rotation during off-center shots.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Podgor in view of Buettner. Podgor differs from the claimed invention in that Podgor does not detail a vapor deposited coating on the head. The use of a vapor deposition process using, for example, titanium material as the coating, on a golf club head to impart a tough, hard, low friction and lustrous outward look is obviated by the patent to Buettner (see col. 3, lines 40-52). Thus, the skilled artisan would have been motivated to modify the club head in Podgor using a vapor deposition process to coat the head with an appropriate material for the reasons advanced in Buettner. It is further noted that the addition of a vapor deposited coating, while not suggested by Podgor, would not have any effect on the playability of function of the Podgor club. Coating any portion of the

heel and toe in the Podgor device would not destroy the alignment set-up of the central transparent insert.

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podgor in view of Reiss and Boznos. Podgor in view of Reiss has been discussed above. To have further modified the Podgor device by including a dampener material to couple the transparent insert within the central cavity in order to reduce the likelihood that the insert is jarred loose and to cushion the insert from impact would have been obvious in view of the patent to Boznos, which shows it to be old in the art to secure a transparent insert to a club head body using an intermediate epoxy resin material (col. 2, lines 38-50).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Each of Cook (Figure 8a), Finney (Figure 1), Reed (Figures 2 and 9), Huang (Figures 7-10), Uebelhor (Figures 1 and 2), and Alcala (Figure 10) show putters having a heel, toe and central section, of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 703-308-1006. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Passaniti

Sebastiano Passaniti
Primary Examiner
Art Unit 3711

S.Passaniti/sp
March 22, 2004